

Appl. No. 10/541,088
Amdt Dated: 4/28/2006
Reply to Office Action of March 7, 2006

REMARKS

Applicants thank the Examiner for acknowledging receipt of Applicants' certified priority document that has been submitted pursuant to 35 USC section 119. Applicants have also replaced the Abstract of the Disclosure in accordance with the Examiner's request.

Applicants respectfully request reconsideration of the prior art rejections set forth by the Examiner under 35 USC sections 102 and 103. Applicants respectfully submit that the prior art references of record, whether considered alone, or in combination, fail to teach or suggest the presently claimed invention.

Applicants claimed invention is directed to an improved optical waveguide and optical transmitting and receiver module wherein a first waveguide has a common transmitting and receiving port at one side and a receiving port at the other side. The first waveguide extends linearly and is able to provide bidirectional transmission of an optical signal. A second waveguide branches off from the first waveguide and makes an acute angle with the receiving port thereby coupling with the first waveguide at one side.

By this amendment, Applicants have modified independent claims 1 and 4 to additionally require that the second waveguide is formed with a dimension such that said one side which is coupled to the first waveguide is smaller than the other side. Furthermore, new claim 7 has been added which also specifies that the second waveguide is formed with a dimension such that said one side which is coupled to said first waveguide is smaller than the other side and additionally specifies that the second waveguide is curved at a portion of adjacent the first waveguide. Applicants respectfully submit that the prior art references of record provide no teaching or suggestion whatsoever regarding these advantageous structures.

Appl. No. 10/541,088
Amdt Dated: 4/28/2006
Reply to Office Action of March 7, 2006

Applicants note that the Yasuda reference describes a waveguide system wherein the transmitting side is tapered and the receiving side is curved, each being independent. See, for example, Figure 4 and 5. Significantly, this reference fails to teach or suggest that the second waveguide is formed with a dimension such that said one side which is coupled to the first waveguide is smaller than the other side and the first waveguide is linear. Rather, in this reference, the structure requires that the first waveguide is a curved unit. This is in sharp contrast with the claimed invention which utilizes a linear first waveguide and a curved and tapered second waveguide that is coupled the first waveguide. (See, for example, claim 7) Claims 1 and 4 also specify a linear first waveguide.

The Fujita reference indicates that the waveguide can be formed as a same layer, however, there is no indication regarding tapering of either waveguide structure and this reference similarly fails to provide any teaching or suggestion whatsoever regarding Applicants' claimed curved structure. Accordingly, in light of the foregoing, Applicants respectfully submit that the prior art references of record fail to teach or suggest Applicants' presently claimed invention. More importantly, the prior art does not provide the improved transmission characteristics which are achieved by the novel physical structure described and claimed in the instant application.

Accordingly, in light of the foregoing, Applicants respectfully submit that all claims now stand in condition for allowance.

Respectfully submitted,

Date: 4/28/06

(Reg. #37,607)

Robert J. Depke
TREXLER, BUSHNELL, GIANGIORGI
BLACKSTONE & MARR, LTD.
105 W. Adams Street, 36th Floor
Chicago, Illinois 60603
Tel: (312) 704-1890
Attorney for Applicants